International Coal Trade and Price Developments in 2002
by Dr. Domenico Maiello

United Nations Economic and Social Council
Economic Commission for Europe - Committee on Sustainable Energy
Twelfth session - Geneva, 18/19 November 2002
AD HOC GROUP OF EXPERTS ON COAL AND THERMAL POWER
WORLD ENERGY DEMAND CONTINUES TO GROW INEXORABLY

> FOSSIL FUELS CONTINUE TO DOMINATE THE ENERGY MIX

> DEVELOPPING COUNTRIES APPROACHING LARGER CONSUMERS

INCREASING TRADES WILL INCREASE MUTUAL DEPENDENCE AMONG NATIONS

> SUPPLY SECURITY WILL MOVE TO THE TOP OF THE NATIONS AGENDA

> MASSIVE INVESTMENTS IN EXCESS OF $4 TRILLION FOR NEW POWER GENERATION ALONE ARE NEEDED FROM NOW AND THE 2030

> MOBILISING SUCH MASS OF MONEY WILL REQUIRE THE LOWERING OF THE REGULATORY AND MARKET BARRIERS AND THE CREATION OF AN ATTRACTIVE INVESTMENT CLIMATE

> INVESTMENTS NEEDED IN DEVELOPPING COUNTRIES REQUIRE HUGE INFLOW OF CAPITAL FROM INDUSTRIALIZED COUNTRIES
World Installed Electricity Generation Capacity

World Primary Energy Demand

- Oil
- Natural gas
- Coal
- Hydro power
- Nuclear power
- Non-hydro renewables

Mtoe: Metric tons of oil equivalent

World Primary Energy Demand

![Graph showing world primary energy demand from 1999 to 2030. The graph indicates an increasing trend with the existing capacity in dark blue and the new capacity in yellow.](image)
COAL: the best buy of all fossil fuels

**SPOT ENERGY USD/GJ - Unadjusted for Heat Rate**

- Coal: RB Index + Freight RB to Rott
- NBP Gas
- Zeebrugge Gas
- IPE Gas Oil
- UKPX Spot Price Index
- Conti Power Index

**SPOT ENERGY USD/MWh - Adjusted for Heat Rate**

- Coal: RB Index + Freight RB to Rott
- NBP Gas
- Zeebrugge Gas
- IPE Gas Oil
- UKPX Spot Price Index
- Conti Power Index

**SPOT ENERGY Prices for November 05, 2002**

<table>
<thead>
<tr>
<th></th>
<th>Price</th>
<th>USD/GJ equivalent</th>
<th>USD/MWh equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>non-adjusted</td>
<td>adjusted for heat rate</td>
</tr>
<tr>
<td>Coal: RB Index + Spot Freight RB to Rott</td>
<td>34.81 USD/mt</td>
<td>1.39</td>
<td>13.48</td>
</tr>
<tr>
<td>IPE Gas (NBP), prompt month**</td>
<td>19.47 p/th</td>
<td>2.89</td>
<td>18.89</td>
</tr>
<tr>
<td>Zeebrugge gas, prompt month*</td>
<td>22.75 p/th</td>
<td>3.37</td>
<td>22.12</td>
</tr>
<tr>
<td>IPE Gas Oil, prompt month**</td>
<td>212.50 USD/mt</td>
<td>4.98</td>
<td>17.95</td>
</tr>
<tr>
<td>UKPX Spot Price Index***</td>
<td>15.87 GBP/MWh</td>
<td>6.88</td>
<td>24.81</td>
</tr>
<tr>
<td>Conti Power Index****</td>
<td>28.57 EUR/MWh</td>
<td>7.92</td>
<td>28.56</td>
</tr>
</tbody>
</table>

* Source: Petroleum Argus  *** Source: UKPX
** Source: www.ipc.uk.com (as of November 1st, 2002)  **** Source: Platts
Strong Electricity Demand Creates Long-Term Opportunities for Coal growth
Approx 1.6 billion peoples - one quarter of the World Population - have no access now to electricity and in the absence of vigorous new policies, 1.4 billion peoples will still lack electricity in 2030!

GROWTH OF NATURAL COAL PRODUCTION CONTINUED IN 2002 AND IS DUE TO CONTINUE FOR THE FORESEEABLE FUTURE.

COAL TRADE FROM THE PRESENT LEVEL OF APPROX 550 mty IS DUE TO GROW TO A LEVEL OF APPROX 730-750 mty BY THE YEAR 2020.

a STEAM COAL IS CONSOLIDATING ITS ROLE AS THE MOST ECONOMIC AND RELIABLE CLEAN FUEL TO PRODUCE ELECTRICITY AND, POSSIBLY HIDROGEN IN THE NEAR FUTURE, FOR MANY CENTURIES. PRESENT TRADE OF 350 mty IS DUE TO GROW TO APPROX 500 plus mty BY THE YEAR 2020.

b COKING COAL MANTAIN ITS ROLE OF UNFUNGIBLE COMPONENT FOR THE PRODUCTION OF PIG IRON IN THE BLAST FURNACE PROCESS. PRESENT TRADE OF 200 mty IS DUE TO GROW TO APPROX 230 mty plus BY THE YEAR 2020.

HARD COKING COAL DEMAND ALREADY NOW EXCEED AVALIABILITY WORLD WIDE

a INCLUDES PCI COALS -- b EXCLUDES PCI COALS
COAL TRADE
COAL REMAINS THE MOST ECONOMICAL AND SAFE SOURCE OF NATURAL FOSSIL ENERGY AND NOW CAN BE THE CLEANEST OF ALL!

CHINA AND INDIA ARE GROWING AS THE TWO LARGEST USERS OF COAL AND BY THE YEAR 2030 ARE FORECASTED TO ACCOUNT FOR TWO THIRDS OF THE PROJECTED INCREASE IN WORLD COAL DEMAND

THE DEPLOYMENT OF CLEAN COAL TECHNOLOGIES WILL INCREASE EVEN MORE COAL ATTRACTIVENESS AS AN ELECTRICITY GENERATING FUEL IN THE LONG TERM AND HELP REDUCE COSTS

SECURITY OF SUPPLY AND NEED OF SOURCES DIVERSIFICATION BECOME THE NEW MUST FOR IMPORT DEPENDENT BUYERS

NECESSITY OF LONG TERM CONTRACTS IS BACK IN FASHION
STEAM AND COKING COAL TRADE: great policy challenges facing the Governments around the World need to be addressed now.

TAX VACATIONS OF, SAY 20-25 YEARS DURATION, WOULD SURELY SPEED UP THE FASTEST GENERALIZATION OF CLEAN COAL TECHNOLOGIES, ... SURELY MUCH BETTER THAN THE CARBON TAX DOES...

THERE IS AN URGENT NEED FOR CLEAR INTERNATIONAL RULES AND FAST SIMPLE PROCEDURES FOR BUILDING POWER PLANTS AND COKE PLANTS USING CLEAN COAL TECHNOLOGY IF THE SPIRIT OF KYOTO IS THE REAL TARGET.

THE GOVERNMENTS OF IMPORTING COUNTRIES WILL NEED TO TAKE A MORE PROACTIVE ROLE IN DEALING WITH ENERGY SECURITY RISKS INHERENT IN FUEL TRADE
SEABORNE: Thermal Coal-Exporter Market Share

1990
- USA: 16%
- Australia: 27%
- South Africa: 25%
- Colombia: 8%
- Indonesia: 2%
- Poland: 4%
- Other: 8%

2002
- Australia: 23%
- South Africa: 17%
- Indonesia: 17%
- Colombia: 10%
- Poland: 4%
- USA: 2%
- Canada: 1%
- Other: 6%

China: 20%
SEABORNE: Thermal Coal-Importer Market Share

1990
- Western Europe 55%
- Japan 19%
- Taiwan 8%
- South Korea 7%
- Hong Kong 5%
- Israel 2%
- Other 3%

2002
- Western Europe 32%
- Japan 20%
- Other 16%
- USA 4%
- Taiwan 10%
- Hong Kong 2%
- South Korea 13%
- Israel 3%
STEAM COAL PRICE TREND: EUROPE SPOT CIF PRICE
(NW EUROPE S/T.M BASIS 6,000 KCAL/KG NAR)

*ICR* Steam coal marker price 1991 – September 2002
(Spot CIF price, NW Europe, US$/t basis 6,000 kcal/kg NAR)

Source: ICR
EU (15) Steam Coal Import Unit values from non EU Countries

Average (all sources)
Australia
U.S.
South Africa
Poland
China
Colombia
Russia
Average trendline
# STEAM COAL PRICE TREND: EUROPE SPOT CIF PRICE

*(NW EUROPE S/T.M BASIS 6.000 KCAL/KG NAR)*

---

### ICR steam coal marker price 1991 – September 2002
*(Spot CIF Price, NW Europe, $/t basis 6,000 kCal/kg NAR)*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>43.53</td>
<td>42.18</td>
<td>34.55</td>
<td>34.55</td>
<td>42.89</td>
<td>43.6</td>
<td>41.72</td>
<td>35.74</td>
<td>29.97</td>
<td>30.15</td>
<td>41.94</td>
<td>34.10</td>
</tr>
<tr>
<td>February</td>
<td>43.23</td>
<td>41.66</td>
<td>34.51</td>
<td>33.99</td>
<td>43.38</td>
<td>43.52</td>
<td>41.01</td>
<td>35.39</td>
<td>29.66</td>
<td>30.30</td>
<td>41.08</td>
<td>33.10</td>
</tr>
<tr>
<td>March</td>
<td>43.85</td>
<td>40.59</td>
<td>33.66</td>
<td>35.19</td>
<td>43.94</td>
<td>42.07</td>
<td>41.11</td>
<td>32.4</td>
<td>29.94</td>
<td>33.85</td>
<td>41.99</td>
<td>33.25</td>
</tr>
<tr>
<td>April</td>
<td>43.91</td>
<td>40.57</td>
<td>34.45</td>
<td>35.23</td>
<td>45.10</td>
<td>41.03</td>
<td>40.82</td>
<td>32.24</td>
<td>29.22</td>
<td>34.81</td>
<td>42.98</td>
<td>32.75</td>
</tr>
<tr>
<td>May</td>
<td>42.63</td>
<td>40.29</td>
<td>34.32</td>
<td>36.18</td>
<td>45.87</td>
<td>39.77</td>
<td>39.93</td>
<td>31.83</td>
<td>29.21</td>
<td>34.39</td>
<td>42.40</td>
<td>28.70</td>
</tr>
<tr>
<td>June</td>
<td>43.58</td>
<td>39.69</td>
<td>33.11</td>
<td>36.26</td>
<td>45.75</td>
<td>39.49</td>
<td>39.12</td>
<td>31.52</td>
<td>27.84</td>
<td>35.13</td>
<td>41.41</td>
<td>28.60</td>
</tr>
<tr>
<td>July</td>
<td>42.40</td>
<td>37.45</td>
<td>32.35</td>
<td>37.04</td>
<td>45.37</td>
<td>39.86</td>
<td>38.11</td>
<td>31.27</td>
<td>26.65</td>
<td>36.16</td>
<td>39.87</td>
<td>27.00</td>
</tr>
<tr>
<td>August</td>
<td>43.11</td>
<td>36.45</td>
<td>32.40</td>
<td>37.51</td>
<td>44.96</td>
<td>40.31</td>
<td>37.75</td>
<td>30.43</td>
<td>26.68</td>
<td>36.20</td>
<td>38.22</td>
<td>25.98</td>
</tr>
<tr>
<td>September</td>
<td>41.99</td>
<td>35.30</td>
<td>32.87</td>
<td>38.31</td>
<td>44.77</td>
<td>40.98</td>
<td>37.34</td>
<td>30.29</td>
<td>27.26</td>
<td>37.01</td>
<td>37.91</td>
<td>30.23</td>
</tr>
<tr>
<td>October</td>
<td>41.94</td>
<td>35.87</td>
<td>33.53</td>
<td>38.93</td>
<td>43.85</td>
<td>41.09</td>
<td>36.98</td>
<td>31.46</td>
<td>29.17</td>
<td>39.56</td>
<td>36.00</td>
<td>34.28</td>
</tr>
<tr>
<td>November</td>
<td>41.90</td>
<td>36.11</td>
<td>34.04</td>
<td>40.77</td>
<td>44.10</td>
<td>41.62</td>
<td>36.76</td>
<td>30.97</td>
<td>29.53</td>
<td>41.73</td>
<td>35.12</td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>41.55</td>
<td>36.16</td>
<td>34.32</td>
<td>42.22</td>
<td>44.01</td>
<td>41.67</td>
<td>36.38</td>
<td>30.49</td>
<td>30.39</td>
<td>43.07</td>
<td>34.50</td>
<td></td>
</tr>
</tbody>
</table>

*Source: ICR*
STEAM COAL PRICE TREND: ASIA SPOT CIF PRICE
(JAPAN S/T.M BASIS 6.000 KCAL/KG NAR)

ICR Asian marker price 1998 – September 2002
(Spot CIF price, US$/t basis 6,000 kcal/kg NAR)

($/tonne)

Source: ICR
### STEAM COAL PRICE TREND: ASIA SPOT CIF PRICE
(JAPAN S/T.M BASIS 6,000 KCAL/KG NAR)

<table>
<thead>
<tr>
<th>Month</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>34.54</td>
<td>27.79</td>
<td>28.08</td>
<td>36.65</td>
<td>31.95</td>
</tr>
<tr>
<td>February</td>
<td>34.35</td>
<td>27.59</td>
<td>27.96</td>
<td>37.74</td>
<td>33.25</td>
</tr>
<tr>
<td>March</td>
<td>33.06</td>
<td>27.69</td>
<td>28.88</td>
<td>39.09</td>
<td>33.62</td>
</tr>
<tr>
<td>April</td>
<td>31.50</td>
<td>27.49</td>
<td>28.99</td>
<td>39.70</td>
<td>33.05</td>
</tr>
<tr>
<td>May</td>
<td>31.43</td>
<td>28.31</td>
<td>29.50</td>
<td>39.87</td>
<td>28.30</td>
</tr>
<tr>
<td>June</td>
<td>29.09</td>
<td>27.21</td>
<td>30.22</td>
<td>38.17</td>
<td>28.55</td>
</tr>
<tr>
<td>July</td>
<td>27.20</td>
<td>27.09</td>
<td>31.42</td>
<td>37.26</td>
<td>27.05</td>
</tr>
<tr>
<td>August</td>
<td>26.31</td>
<td>27.28</td>
<td>32.02</td>
<td>35.16</td>
<td>26.60</td>
</tr>
<tr>
<td>September</td>
<td>25.54</td>
<td>26.24</td>
<td>34.98</td>
<td>35.05</td>
<td>27.88</td>
</tr>
<tr>
<td>October</td>
<td>26.13</td>
<td>29.50</td>
<td>35.51</td>
<td>34.93</td>
<td>29.20</td>
</tr>
<tr>
<td>November</td>
<td>27.11</td>
<td>28.69</td>
<td>35.80</td>
<td>32.05</td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>27.45</td>
<td>28.93</td>
<td>37.75</td>
<td>31.05</td>
<td></td>
</tr>
</tbody>
</table>

*Source: ICR*
COKING COAL EXPORT PRICES: YEAR 2001

- IN 2001 BASE PRICE FOR JSM INCREASED FROM US$40.85 TO US$43.85 FOR AUSTRALIAN BEST COKING AND FROM US$39.22 TO US$42.55 FOR CANADIAN COALS, NOTIONALLY +US$3t.m. or 7.5%
- Other Buyers who had been watching JSM results, for too long, ended up with prices up to US$ 55 for Australian and around US$ 52 for Canadian products.
- Early settlers grabbed instead prices very much similar to the JSM levels (or lower) for both Australian and Canadian coals.
- JSM withdraw almost entirely from the USA were, strong domestic demand and the closure of the mines occurred in year 2000 put coal prices in a crescendo that climbed to over the US$70 mark be the end of the year. Certain Buyers faced real problems in securing the needed tonnage. Early settlers attained good lower prices in the range of US$59-60 depending on the timing of negotiations.
- To achieve the 7.5% hard coking coal rise, JSM had no alternative other than accept the elimination of the semi-hard category of coals which seeded the <graphic aberration>, in 2003, of an unnatural gap of $15 between coking coal prices and semi-soft prices.
COKING COAL EXPORT PRICES: YEAR 2002

- IN 2002 THE SPIRIT OF REVENGE POISONED THE ENTIRE CYCLE OF NEGOTIATIONS FOR OPPOSITE REASONS WHICH HAVE BEEN COMPLICATED BY THE FEAR OF A STEEL WAR FOR SURVIVAL WITH GOVERNMENTAL REQUESTS TO REDUCE UP TO 30% OF INSTALLED STEEL CAPACITY ACROSS ALL NATIONS.


- Negotiations protracted from October 2001 until August 2002, and, in some cases are still underway now! Meantime steel prices boomed and most steelmakers turned from red ink into profitability with no steel plant closure and 6%+ volume gains!

- After an inconclusive first quarter the Europeans and Other Buyers settled, before the JSM, new prices with Australia, Canada and the U.S.A. respectively at around US$ 48.50 - US$ 46.50 and - US$ 57 to 58 depending on specifications, etc.

- After strong resistance JSM settled first soft coal prices (profiting of meantime weakened steam coal prices) and finally in August had to surrender at US$ 49.25 for Australian and US$ 46-48 for Canadian coals speeding up the consolidation of their Steel activities from six Major Producers into basically two Major Group.
COKING COAL PRICES FOR NEXT YEAR 2003?

- KEY TO 2003 ARE THE WINDS OF WAR, WITH THEIR POTENTIAL HEAVY LOAD OF POSSIBLE DISRUPTIONS OF THE ENERGY PRICES AND, THE POSSIBLE CONTINUATION OF THE CURRENT STEEL RECOVERY WITH NEW INCREASES OF STEEL PRICES ALL OVER.

- HIGH RANK COALS OFFER, REMAIN BELOW THE LEVEL OF DEMAND, AND THE CHINESE INCOGNITA MAY HAVE SURPRISING INFLUENCES NOT ONLY ON PRICES BUT ALSO ON AVAILABILITY.

- STEAM COALS, AFTER HITTING THEIR BOTTOM LEVELS, OF MANY YEARS BY END JULY 2002, due mostly to climatic cycles, HAVE RECENTLY RECOVERED AND -APART FROM THE WINDS OF WAR- MIGHT REMAIN RELATIVELY STABLE AROUND THE PRESENT LEVELS.

- THE pci COALS, WHICH HAVE ATTAINED A BALANCED SITUATION, BETWEEN OFFER AND DEMAND, OVER THE LAST TWO YEARS, ALSO DUE TO SCARCITY OF FURNACE COKE, MAY BE THE SURPRISE OF 2003 WITH A HUGE PRICE JUMP! Here the gap price to value is > $70t

- ON HIGH RANK MY CRISTAL BALL READS $+2/3, $+4/5 ON SEMI SOFT AND A DOUBLE DIGIT JUMP IN pci COALS. U.S.COAL WILL REMAIN <BEST BUY LIKE THIS YEAR> FOR SOFISTICATED STEEL PRODUCERS.
SEABORNE: Met Coal - Exporter Market Share

1990:
- Australia: 35%
- Canada: 16%
- South Africa: 2%
- Other: 7%
- Poland: 5%
- PR China: 2%

2002:
- Australia: 58%
- Canada: 14%
- USA: 11%
- Other: 9%
- PR China: 6%
- Poland: 1%
- South Africa: 1%
SEABORNE: Met Coal - Importer Market Share

1990
- Western Europe: 27%
- Japan: 45%
- South Korea: 7%
- Taiwan: 3%
- Brazil: 6%
- Other: 12%

2002
- Western Europe: 22%
- Japan: 44%
- South Korea: 10%
- Taiwan: 4%
- Brazil: 6%
- Other: 14%
EU Coking Coal: Import Unit values from non EU Countries

1984
NEGOTIATIONS FOR THE COAL YEAR 2002 HAVE PARTIALLY ADDRESSED PAST YEARS' ANOMALIES

Japanese Hard Coking Coal Prices

$/tonne fob

TO RESTORE BALANCE IN COKING COAL PRICING?
COAL: SEA FREIGHT RATES

COAL FREIGHT RATES

USD/Ton

$ 8,75

$ 6,90

Panamax Richards Bay / Le Havre - 70,000 t
Capesize H.Roads / Dunkirk - East 110,000 t
CAPESIZE IRON ORE: SEA FREIGHT RATES

CAPESIZE IRON ORE FREIGHT RATES

USD/Ton

$ 6,40

$ 5,00

10-99  12-99  03-00  05-00  07-00  09-00  11-00  01-01  03-01  05-01  07-01  09-01  12-01  02-02  04-02  06-02  08-02  10-02

Tubarao / Fos 145,000 t

Nouadhibou / Dunkirk 100/110,000 t
EXCHANGE RATES : THE INVISIBLE POWERFULL PARTNER/COMPETITOR OF COAL PRODUCERS

EXCHANGE RATES VOLATILITY IS THE LARGEST UNDESIRABLE FACTOR OF TURBULENCE IN THE FREE MARKET COMPETITION AND COAL TRADING

NATIONAL COAL SUBSIDY IS THE SECOND LARGEST CAUSE FOR FREE MARKET ABERRATIONS

UNCONVERTIBLE CURRENCIES HIT THE FUNDAMENTALS OF THE INTERNATIONAL LABOR COST STRUCTURES
The Australian dollar is the official currency of the Commonwealth of Australia. The conventional market quotation is the number of US dollars per Australian dollar. It is an independent, free-floating currency.
The Canadian dollar is the official currency of Canada. The conventional market quotation is the number of US dollars per Canadian dollar. It is an independent, free floating currency.
Exchange rate of U.S.A. $ versus AFRICAN RAND

The South African rand is the official currency of The Republic of South Africa. The conventional market quotation is the number of rand per US dollar. It is an independent, free-floating currency.
The Colombian peso is the official currency of the Republic of Colombia. The conventional market quotation is the number of pesos per US dollar. It is an independent, free-floating currency.
The Indonesian rupiah is the official currency of the Republic of Indonesia. The conventional market quotation is the number of rupiah per US dollar. It is an independent, free-floating currency.
Exchange rate of U.S.A. $ versus RUSSIAN RUBLE

The Russian rubble is the official currency of The Russian Federation. The conventional market quotation is the number of rubbles per US dollar. It is a managed, floating currency.
The Chinese yuan (renminbi) is the official currency of The People's Republic of China. The conventional market quotation is the number of yuan per US dollar. It is a managed, floating currency.
CHINA:
THE GIGANTIC INCOGNITA OF THE MARKET

WILL CHINA BECOME SELF SUFFICIENT IN COAL?
WILL CHINA CONTINUE TO EXPORT COAL & COKE?
WILL CHINA ALSO IMPORT COKING & STEAM COAL?
WILL CHINA RESTORE COKING COAL PRODUCTION?
WILL CHINA BE ABLE TO EXPORT FURNACE COKE?
WILL CHINA BE ABLE TO ATTAIN TRADING DISCIPLINE?
WILL CHINA ATTAIN TRADING WORLD STANDARDS?
WILL CHINA ALLOW FREE MARKET COMPETITION?
Note1: 2002 production figures (and split) are annualised based on reported January to July 2002 figures. All production figures are those released by the Chinese Government.

Note2: 2001-2 consumption is an estimate. All consumption data from the International Energy Agency (IEA). The IEA's data is very close to official Chinese statistics. It is used here because it contains a 2001 estimate. In China coal consumption data generally lags two years behind production data.
STEEL INDUSTRY IS CAPTIVE OF CHINESE COKE EXPORTS!

- In 2000 and 2001 China exported furnace coke in the range of 15-16mty. This level will fall below 12mty? In 2002 and could be halved in 2003…or be even worse depending upon Chinese growth rate.

- Nominal prices which were in the range of US$ 65-70 fob China, depending on specifications, have climbed to over US$ 100 fob China in less than six months time, with the aggravations that the better quality product has disappeared and the trading practice of the Chinese has attained <Top Level> on … unreliability and commercial risk.

- …in the meantime in quite few countries coke plants have been shut either by political/ecological reasons of for natural technical obsolescence with no uniform rules in place to allow the needed urgent replacement.

- Coke shortage from China is the result of the strong intervention of the Chinese authorities to alleviate the problem of the <illegal> coking coal mines and to try to halt coal miners climbing fatalities. Over 10,000 in 2002?

- In 2003 coke price will go back to its pre-China-Era levels of +$150?
EXPORT PRICES FROM CHINA BOOMING ON A DAILY BASIS

EXPORT VOLUMES HAVE DECLINED, PRICES CLIMBINING TO OVER $110 BY NOVEMBER 2002 AND RELIABILITY OF DELIVERY COLLAPSING! WHAT NEXT?
SOURCES AND CREDITS:
@ INTERNATIONAL ENERGY AGENCY
@ U.S. EIA DEPARTMENT OF ENERGY OF THE U.S.A.
@ U.E. COMMISSION OF THE EUROPEAN COMMUNITIES
@ McCLOSKEY COAL SERVICES
@ PLATTS INTERNATIONAL COAL REPORT
@ THE JAPAN ECHO
@ BARLOW JONKER - CHINA COAL REPORT
@ COKE MARKET REPORT
@ CRU MONITOR - STEELMAKING RAW MATERIALS

---

UN ECE Draught Survey Code-
Link for downloading
http://www.zilli.com/draught.survey/